



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,342	10/20/2003	Ludwig Busam	CM2536CQ	2901

27752 7590 12/28/2005

THE PROCTER & GAMBLE COMPANY  
INTELLECTUAL PROPERTY DIVISION  
WINTON HILL TECHNICAL CENTER - BOX 161  
6110 CENTER HILL AVENUE  
CINCINNATI, OH 45224

EXAMINER

LONEY, DONALD J

ART UNIT	PAPER NUMBER
----------	--------------

1772

DATE MAILED: 12/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

✓

<b>Office Action Summary</b>	<b>Application No.</b> 10/689,342	<b>Applicant(s)</b> BUSAM ET AL.	
	<b>Examiner</b> Donald Loney	<b>Art Unit</b> 1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 October 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2 and 4-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>See Continuation Sheet</u> .           |

Continuation of Attachment(s) 6). Other: marked up copies of figures 2 and 3 of JP 56-140153 and figure 4 of Mizutani et al..

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 4-9 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 56-140153 cited by the applicant as presented in the last office action, mailed July 11, 2005.

JP 56-140153 discloses a corrugated fiber sheet containing a line pattern of thermo compression bonding and/or welding dots 1. This is considered a pattern line since the applicant, on page 16, lines 5-10 and figure 6 also disclose the line pattern can be dots. The dots connect at least two corrugations. The dots can be considered as two sets of parallel lines that criss-cross (first and second line patterns per claim 3) as applicant recites, and shows in figure 6. The pattern can also be continuous per claim 7 (refer to page 5, lines 15-18). Refer to figure 7 along with page 2, last paragraph through page 6, paragraph 3.

Art Unit: 1772

3. Claims 1, 8, 12 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Mizutani et al (6586076) as presented in the last office action, mailed July 11, 2005.

Mizutani et al discloses a corrugated fiber sheet with what one can consider a line pattern of heat bonded regions 2C that connect corrugations. The regions connect at least two corrugations. The regions can be considered as two sets of parallel lines wherein one is not parallel to the other. This region is considered embossed heat bonded since the molds 11,12 or rollers 21, 22 are heated to improve the moldability of the sheet and connecting part 2C when forming the same. Refer to figures 4 and 6 along with column 4, line 17-54, column 5, lines 27-65, column 6, lines 1-51 and column 9, lines 29-40.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 10, 11, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 56-140153 in view of Easley et al (3653382) as presented in the last office action, mailed July 11, 2005.

The primary reference teaches the invention substantially as recited except for the corrugations being deformed (i.e. flattened into a pleated type structure) as recited in claim 14 and shown by applicants' figures 4B and 4C. See the 35 U.S.C. 102 rejection above.

Art Unit: 1772

Easley et al teaches to form embossed patterned lines 6 that run non-parallel to the flattened corrugations. Refer to figures 1-3 showing a flattened type structure as recited by the applicant and shown in figures 4B and 4C referred to above.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to JP 56-140153 to deform the corrugated sheets, as taught by Easley et al, in order to form a flattened type structure (i.e. pleated) therefrom, motivated by the fact Easley et al teaches to emboss the structure with lines 6 that run non-parallel to the flattened areas. It would also be obvious to one of ordinary skill in the art to form the bonding in the vale region of the corrugation motivated by the fact JP 56-140153 shows the bonding 1 at the bottom of the sheet in figure 1. The flattened corrugations, bonding in the vale section of the corrugation and the properties recited in claims 10 and 11 would be obvious to one of ordinary skill in the art motivated by the fact JP 56-140153 discloses that the bonding is done in order to improve strength, control linting and improve softness, all of which are controlled by the bonding features of the sheet.

6. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizutani et al as presented in the last office action, mailed July 11, 2005.

The primary reference teaches the invention substantially as recited except for the properties of claims 10 and 11 along with the additional second bonding pattern of claim 9. See the 35 U.S.C. 102 rejection above.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to Mizutani et al to form a sheet of the loft specified

Art Unit: 1772

motivated by the fact that Mizutani et al teaches that it is known that one wants to retain the soft feeling and cushioning properties of the sheet (column 1, lines 41-45) in order to provide a superior product there from with desired properties for a particular application. Also, the secondary bonding pattern of claim 9 would be obvious to one of ordinary skill in the art motivated by the fact it would supply additional bonding there to, if one desired so, in order to form a product of desired properties for a particular application.

### ***Response to Arguments***

7. Applicant's arguments filed October 11, 2005 have been fully considered but they are not persuasive. The applicant argues that JP 56-140153 bonding pattern of dots fails to teach bonding pattern lines. However, as indicated above, and on page 3, lines 20-23 and page 16, lines 5-10 of the applicant's specification, the pattern line can be formed of dots 610. JP 56-140153 also discloses that the lines can be continuous per instant claim 7 (page 5, lines 15-18). The examiner has included drawings 2 and 3 of JP 56-140153 and figure 4 of Mizutani et al with crossing lines showing what can be considered two sets of parallel lines wherein one set is not parallel to the other. The applicant argues that Easley et al fails to teach corrugated webs, however, the applicant deforms the corrugations as recited in the claims and then this results in a flattened corrugation as shown in applicants figure 4B and also shown by the folded structure of Easley et al in figures 2, 4 and 6. Once the corrugation is flattened it appears as a folded structure per the instant claims and shown by Easley et al.

***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald Loney whose telephone number is (571) 272-1493. The examiner can normally be reached on Mon, Tues, Thurs and Fri. 8AM-4PM, flex schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 1772

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Donald Loney  
Primary Examiner  
Art Unit 1772

DJL:D.Loney  
12/22/05

Figure 18 is a micrograph illustrating a plan view of an example of the nonwoven fabric of the present invention.

Figure 19 is a cross-sectional micrograph of the same type of nonwoven fabric as that shown in Figure 18.

Figure 20 is an enlarged cross-sectional micrograph of the nonwoven fabric shown in Figure 19.

- 1 Spot bonded portion
- 2 Non-bonded portion

